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EXAMINER

JONES, HEATHER RAE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/775,490	Applicant(s) NELSON, PATRICK N.	
	Examiner HEATHER R. JONES	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/10/04, 8/6/07, 12/6/07, 2/29/08, 5/12/08, 7/14/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 49-51 are objected to because of the following informalities: claims 49-51 should depend from "47" and not --42--. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 42-51 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 42-51 define a processor-readable medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed processor-readable medium can range from paper on which the program is written, to a program simply contemplated and memorized by a person. Furthermore, Claims 42-51 define a modulated data signal with descriptive material. While "functional descriptive material" may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a modulated data signal embodying that same functional descriptive material is neither a process nor a product (i.e., a tangible

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“thing”) and therefore does not fall within one of the four statutory classes of § 101.

Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12, 15-19, 32-35, 37, 38, 40, and 42-46 are rejected under 35

U.S.C. 102(e) as being anticipated by Subramanian et al. (U.S. Patent 2005/0018775).

Regarding claim 1, Subramanian et al. discloses a method comprising:
determining whether at least one sample of a presentation is processed by a first component of a pipeline at an expected time (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value); and
requesting a second component of the pipeline to alter the manner in which the second component processes a portion of the presentation if the sample is not processed at the expected time (paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **2**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component comprises a media sink (paragraph [0049] – media sink – comparing the PTS value with the STC value).

Regarding claim **3**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the second component comprises a codec (paragraph [0049] – the decoder drops the B-picture therefore, altering the manner in which the decoder processes the signal).

Regarding claim **4**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component comprises a media sink and the second component comprises a codec (paragraph [0049] – media sink – comparing the PTS value with the STC value; the decoder drops the B-picture therefore, altering the manner in which the decoder processes the signal).

Regarding claim **5**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a sample (paragraph [0049] – one sample is one B-picture).

Regarding claim **6**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a sample other than the at least one sample (paragraph [0049] - there are more than one B-picture per presentation).

Regarding claim **7**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the portion of the presentation comprises a frame (paragraph [0049] – one B-picture is a frame).

Regarding claim **8**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the at least one sample is processed at the expected time comprises comparing a timing value in the at least one sample to a predetermined time frame associated with the presentation (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **9**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the at least one sample is processed at the expected time comprises comparing a timing value in the at least one sample to a presentation clock (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **10**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the at least one sample is processed at the expected time comprises determining whether a timing value in the at least one sample was processed by the first component at the time specified by the timing value (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **11**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that determining whether the at least one sample is processed at the expected time comprises determining whether a timing value in the at least one sample was processed by the first component within a given time of a time specified by the timing value (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **12**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the at least one sample comprises a first sample and a second sample and wherein determining whether the at least one sample is processed at the expected time comprises determining if the first sample is processed by the first component at a first expected time and determining if the second sample is processed by the first component at a second expected time (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value and is processed if the PTS value and the STC value differ by less than a predetermined threshold).

Regarding claim **15**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that altering the manner in which the second component processes a portion of the presentation comprises dropping at least one sample of the presentation (paragraph [0049] – if the PTS

value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **16**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that altering the manner in which the second component processes a portion of the presentation comprises dropping at least one frame of the presentation (paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **17**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the first component is a media sink, the second component is a codec, and the wherein altering the manner in which the second component processes a portion of the presentation comprises dropping at least one frame of the presentation (paragraph [0049] – the presentation time stamp for every B-picture is compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **18**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the pipeline includes a media source, a media sink, and a topology of media processing nodes; the first component is a node in the topology; and the second component is the media sink (paragraph [0049] – the presentation time stamp for every B-picture is

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compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **19**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1 including that the pipeline includes a media source, a media sink, and a topology of media processing nodes; the first component is a node in the topology including a codec; and the second component is the media sink (paragraph [0049] – the presentation time stamp for every B-picture is compared to the system time clock value – media sink; if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claims **32-35, 37, 38, and 40**, these are apparatus claims corresponding to the method claims 1-4 and 15-17. Therefore, claims 32-35, 37, 38, and 40 are analyzed and rejected as previously discussed with respect to claims 1-4 and 15-17.

Regarding claims **42-46**, these are processor-readable medium claims corresponding to the method claims 1-4, 8, and 15. Therefore, claims 42-46 are analyzed and rejected as previously discussed with respect to claims 1-4, 8, and 15.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13, 14, 36, 39, and 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian et al. as applied to claim 1 above, and further in view of Ogier (U.S. Patent Application Publication 2003/0095504).

Regarding claim **13**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1, discloses comparing the presentation time stamp for every B-picture is compared to the system time clock value (paragraph [0049]), but fails to disclose that the at least one sample comprises a first sample and a second sample and wherein determining whether the at least one sample is processed at the expected time comprises: determining a first timing error as a difference between a time at which the first sample is processed by the first component and a time at which the first sample is expected to be processed; determining a second timing error as a difference between a time at which the second sample is processed by the first component and a time at which the first sample is expected to be processed; and determining if the second timing error is greater than the first timing error.

Referring to the Ogier reference, Ogier discloses a method comprising monitoring network congestion using ongoing statistical measurements (paragraph [0332]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have monitored network congestion using ongoing statistical measurements as disclosed by Ogier in the method disclosed by Subramanian et al. in order to monitor network congestion and either alerting the user of the congestion or to change the processing of the data in order to accommodate for the network traffic. By maintaining statistical data Subramanian would be comparing one sample to the next to determine network congestion.

Regarding claim **14**, Subramanian et al. discloses all the limitations as previously discussed with respect to claim 1, discloses comparing the presentation time stamp for every B-picture is compared to the system time clock value (paragraph [0049]), but fails to disclose that at least one sample comprises a first sample including a first timing value and a second sample including a second timing value and wherein determining whether the at least one sample is processed at the expected time comprises determining whether the first timing value more closely corresponds to a time at which the first sample is processed by the first component than the second timing value corresponds to a time at which the second sample is processed by the first component.

Referring to the Ogier reference, Ogier discloses a method comprising monitoring network congestion using ongoing statistical measurements (paragraph [0332]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have monitored network congestion using ongoing statistical measurements as disclosed by Ogier in the method disclosed by Subramanian et al. in order to monitor network congestion and either alerting the user of the congestion or to change the processing of the data in order to accommodate for the network traffic. By maintaining statistical data Subramanian would be comparing one sample to the next to determine network congestion.

Regarding claims **36, 39, and 41**, these are apparatus claims corresponding to the method claims 13 and 14. Therefore, claims 36, 39, and 41 are analyzed and rejected as previously discussed with respect to claims 13 and 14.

Regarding claims **47-51**, these are processor-readable medium claims corresponding to the method claims 1-4, 8, 13, and 15. Therefore, claims 47-51 are analyzed and rejected as previously discussed with respect to claims 1-4, 8, 13, and 15.

7. Claims 20-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian et al. (U.S. Patent 2005/0018775) in view of Ogier (U.S. Patent Application Publication 2003/0095504).

Regarding claim **20**, Subramanian et al. discloses a method comprising: determining if timeliness of sample processing in a multi-component pipeline is degrading, the determination being made based on processing times of a first sample and a second sample of a presentation individually (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value); altering the manner in which a component in the pipeline processes a portion of the presentation if the timeliness of sample processing is degrading (paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding). However, Subramanian et al. fails to disclose comparing the processing times of a first sample and a second sample of the presentation.

Referring to the Ogier reference, Ogier discloses a method comprising monitoring network congestion using ongoing statistical measurements (paragraph [0332]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have monitored network congestion using ongoing statistical measurements as disclosed by Ogier in the method disclosed by Subramanian et al. in order to monitor network congestion and either alerting the user of the congestion or to change the processing of the data in order to accommodate for the network traffic. By maintaining statistical data Subramanian would be comparing one sample to the next to determine network congestion, thereby dropping samples when necessary.

Regarding claim **21**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined relative to a single component in the pipeline (Subramanian et al.: paragraph [0049]).

Regarding claim **22**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first component is determined relative to a first component in the pipeline and the processing times of the second component is determined relative to a second component in the pipeline (Subramanian et al.: paragraph [0049]; Ogier: paragraph [0332]).

Regarding claim **23**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined using timing information in the samples (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **24**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the processing times of the first and the second samples are determined using timing information in the samples and a presentation clock (paragraph [0049] - the presentation time stamp for every B-picture is compared to the system time clock value).

Regarding claim **25**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of sample processing is determined based on: a first timing difference between a time specified in a timing value in the first sample and a that time the first sample is processed by a component in the pipeline; a second timing difference between a time specified by a timing value in the second sample and a time that the second sample is processed by a component in the pipeline (Subramanian et al.: paragraph [0049]; Ogier: paragraph [0332]).

Regarding claim **26**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of sample processing is determined based on: a first timing difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a first component in the pipeline; a second timing difference between a time specified by a timing value in the second sample and a time that the second sample is processed by second component in the pipeline (Subramanian et al.: paragraph [0049]; Ogier: paragraph [0332]).

Regarding claim **27**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of sample processing is determined by: determining a first timing difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a component in the pipeline; determining a second timing difference between a time specified by a timing

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value in the second sample and a time that the second sample is processed by a component in the pipeline, wherein the second sample is processed at a later time than the first sample; and determining that timeliness of sample processing is degrading if the second timing difference is greater than the first timing difference (Subramanian et al.: paragraph [0049]; Ogier: paragraph [0332]).

Regarding claim **28**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that the timeliness of sample processing is determined by: determining a first timing difference between a time specified in a timing value in the first sample and a time that the first sample is processed by a selected component in the pipeline; determining a second timing difference between a time specified by a timing value in the second sample and a time the second sample is processed by the selected component, wherein the second sample is processed at a later time than the first sample; and determining that timeliness of sample processing is degrading if the second timing difference is greater than the first timing difference (Subramanian et al.: paragraph [0049]; Ogier: paragraph [0332]).

Regarding claim **29**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that altering the manner in which a component in the pipeline processes a portion of the presentation comprises instructing the component to drop a sample (Subramanian et al.: paragraph [0049] – if the PTS value and the STC value

differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **30**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that altering the manner in which a component in the pipeline processes a portion of the presentation comprises instructing the component to drop each sample in a frame of the presentation (Subramanian et al.: paragraph [0049] – if the PTS value and the STC value differ by more than a predetermined threshold, the video decoder drops the B-picture without decoding).

Regarding claim **31**, Subramanian et al. in view of Ogier discloses all the limitations as previously discussed with respect to claim 20 including that each component comprises processor executable instructions executed by a processor (Subramanian et al.: Fig. 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623

Heather R Jones
Examiner
Art Unit 2621

HRJ
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